

REMARKS

This amendment is made in response to the Office Action of February 22, 2006 in which claims 1-10 were rejected.

Regarding the 35 U.S.C. § 102(e) rejection of claims 1, 2, 5-7, and 10 as being anticipated by Bridgelall (U.S. 6,717,516), the applicant agrees with the Examiner with respect to independent claims 5 and 10 but not claims 1-9 for the reasons given below.

Regarding independent claim 5, applicant agrees with the Examiner that Bridgelall anticipates a radio device having a radio receiver and a radio transmitter characterized by operability of the device in two modes, a Bluetooth mode and an RF tag reader mode. However, claim 5 has been amended to recite that the receiver and transmitter comprise *a single transceiver* that adapts itself to operate as a bluetooth transceiver in said bluetooth mode and an RF-tag reader on said RF tag reader mode by changing its reception and transmission capabilities. The Bridgelall device shows a transceiver front end that has separate transceivers for the RFID part and the Bluetooth part. Bridgelall even shows the baseband part as separate.

Moreover, claim 5 has been amended to make it clear that a single antenna is useable for the claimed transceiver operating as said RF tag reader or as said bluetooth transceiver. In other words, claim 3 has been cancelled and its limitations added into claim 5 in order to emphasize the inventive aspects of the present invention and to make differing aspects even clearer when considering the Bridgelall reference which explicitly shows the use of two antennas.

Regarding claim 6 which depends from claim 5, applicant can agree with the Examiner that Bridgelall teaches operability of the radio device in either mode but not using a singular radio receiver and transmitter. Rather, Bridgelall discloses separate transceivers 34, 38.

Regarding claim 7, applicant disagrees that the fixed device 12 of Bridgelall

used the limitations of claim 7. Although Bridgelall shows other devices besides the fixed devices 12A, 12B, 12C, 12D in the corresponding piconets 14A, 14B, 14C, 14D, the fixed devices 12 themselves are not shown as being in an incorporating device having additional device functionality. Rather, the fixed device 12 is something like a base station that can communicate with both Bluetooth devices and RFID tags but is not itself incorporated in another device.

In summary, the device of Bridgelall is expressly described with the frontend transmitter/receiver of the two radios having to be different (see column 5, lines 30-32) and the thing that is efficiently and effectively combined by Bridgelall is the bitstream processor 50, not the frontend transmitter/receiver of the two radios since these, according to Bridgelall, need to be different. The applicant, on the other hand, has perceived that the frontend also can be shared between the RFID function and the Bluetooth function and has shown how to do it.

Withdrawal of the 35 U.S.C. § 102(e) rejection of claims 5-7 is requested.

With respect to claim 10, applicant agrees that it is anticipated by Bridgelall since everything in claim 10 is shown by Bridgelall. Bridgelall shows a radio device 12 having a radio receiver (RX) in both the RFID frontend 38 and the Bluetooth frontend 34. Bridgelall also shows a radio transmitter, actually a pair of transmitters (TX) in both frontends 38, 34. Bridgelall also shows a signal processor 50 in Fig. 2 which is described as a bitstream processor that is shared between the RFID side and the Bluetooth side. Its function is to arrange the received bitstreams into a common format which is loaded into FIFO register 54 (see Fig. 2). The bitstream processor 50 is also shown in detail in a functional way in Figs. 5 and 6 for both receive and transmit functions. In both Figs. 5 and 6 a multiplexer is shown under the control of a finite state machine which is able to choose between receiving or transmitting RFID or bluetooth signals. The characterized part of claim 10 specifies that the control logic is for controlling the radio device in two modes and clearly the finite state machine 162 of Figs. 5 and 6 is able to cause the bitstream processor 50 to operate as either a bluetooth device or an RF tag reader. Therefore, claim 10 is unpatentable because it is anticipated under 35 U.S.C. § 102(e) by Bridgelall.

Therefore, claim 10 has been amended in a manner similar to that described above with respect to claim 5 for similar reasons. Withdrawal of the novelty rejection of claim 10 is requested.

With respect to claims 1 and 2, the applicant has carefully studied Bridgelall et al and has come to the conclusion that Bridgelall does not show a transceiver that adapts itself to operate as an RF tag reader or as a Bluetooth transceiver by changing its reception and transmission capabilities. The reason for this is because Bridgelall describes the RF module 34 and the RFID frontend 38 (shown in detail in Fig. 3) as separate devices. The Examiner points to the RFID radio interface 44 of Fig. 2 or the Bluetooth radio interface 42 for changing its reception and transmission capabilities, pointing to column 5, lines 1-15. However, the cited passages and blocks 44, 42 are shown in the left hand side of Fig. 4 as comprising analog-to-digital converters, digital-to-analog converter, hopping synthesizer 212, RX filter (shaper), radio controller 214 and RX filters. These do not constitute a transceiver. Rather, the Examiner is referred to column 5, line 8 where the Bridgelall reference clearly identifies the RFID transmitter/receiver 38 as being a transmitter/receiver. Also, the RF module 34 similarly comprises a transmitter/receiver of the radio frontend. In any event, both the transceivers 34, 38 and the radio interfaces 42, 44 are separate devices and are not anticipatory of claim 1 because it claims the word "transceiver" in the singular. In other words one transceiver adapts itself and there is no need for two transceivers. That is the whole point of the present invention which is shown in one embodiment having the traditional transceiver function shown in detail as part of a similar frontend except only one being shown, not two, for carrying out the two functions.

Although Bridgelall anticipates claim 5 and claim 10, there is no anticipation of claim 1 or its dependent claims since Bridgelall shows distinct transceivers in the radio frontend and even in the baseband part. The only thing that Bridgelall shows is sharing a common processor 50.

It is not believed permissible to broadly read the word "transceiver" onto the entire device of Bridgelall since it comprises more than merely a transceiver. For

instance, claim 5 makes it clear that such a transceiver could be incorporated into a radio device.

Without conceding the point and merely to further clarify the nature of the transceiver claimed in claim 1, applicant has chosen to amend claim 1 to incorporate the limitations of claim 3 therein wherein a single antenna is useable for the claimed transceiver operating as the RF tag reader or as the bluetooth transceiver. This makes claim 1 even more clearly allowable over the Bridgelall reference.

Regarding claim 2, the cited passages do not mention the 2.4 GHz ISM band.

Withdrawal of the novelty rejection of claims 1 and 2 is requested.

Regarding the obviousness rejection of claims 3, 4, 8, and 9 under 35 U.S.C. § 103(a) over Bridgelall in view of Irvin (U.S. 6,297,737), the applicant has the following remarks. Inasmuch as claim 3 has been cancelled and its limitations inserted into all of the independent claims, it is requested that the Examiner consider the remarks which follow concerning claim 3 to be addressed both to the novelty and nonobviousness of the amended independent claims.

Regarding claim 3, there is an express statement in column 5, lines 29-32 of Bridgelall that “only the frontend transmitter/receiver of the two radios need to be different.” Therefore, Bridgelall does not merely not teach a single antenna but that it needs to be different.

Furthermore, the Irvin reference shows a single antenna 212 usable with a single technology (Bluetooth) for use with tags 240. The locating transceiver 222 is disclosed as a Bluetooth technology and is not disclosed as useable in a dual-mode scenario. The only thing that Irvin says is that the “exemplary embodiment” is a Bluetooth transceiver (see column 4, lines 1-4) but that other wireless communication interfaces could be used i.e., instead. It is not suggested that the interfaces would be dual-mode interfaces. Therefore, the only thing that Irvin shows is a single antenna for use with a single technology and there would be no motivation from either Irvin or the primary Bridgelall reference to use a single antenna with a dual-mode transceiver. As pointed out above, Bridgelall even states that the two front ends have to be different and in this connection showing two

antennas 36, 40. So it is not seen how the teachings of Irvin could be provided to the device of Bridgelall in order to reduce costs and hassle of carrying two separate devices. The antenna 214 of Fig. 3 of Irvin is a cellular antenna useable in the mobile communications network shown in Fig. 2 of Irvin.

Regarding claim 4, the present invention shows a transceiver in a mobile terminal that adapts itself to operate as an RF tag reader or as a Bluetooth transceiver by changing its reception and transmission capabilities. The mobile terminal 210 of Figs. 2 and 3 of Irvin does include two antennas but the transceiver 222 is not adaptable as claimed as pointed out above. The transceiver 222 is only disclosed as being a single technology such as Bluetooth.

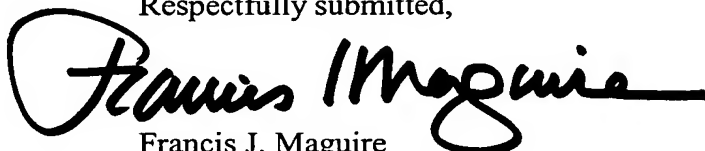
Regarding claim 8, it depends from claim 7 which in turn depends from claim 5. Although the mobile terminal 210 of Fig. 2 and Fig. 3 of Irvin is capable of operating as both a mobile telephone and a RF tag reader, it does not have a radio receiver and a radio transmitter that comprise a single transceiver that adapts itself to operate as a Bluetooth transceiver in a Bluetooth mode and an RF tag reader in an RF reader mode. The tag reader function of Irvin is not adaptable and only uses one technology and there is only one mode associated with that particular technology.

Claim 9 is similar to claim 8 in this regard.

Withdrawal of the 35 U.S.C. § 103(a) rejection of claims 3, 4, 8 and 9 is requested.

The objections and rejections of the Office Action of February 22, 2006,
having been obviated by amendment or shown to be inapplicable, withdrawal
thereof is requested and passage of claims 1-10 to issue is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, reading "Francis J. Maguire". The signature is written in a cursive style with a large, looping initial "F".

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